

5. A List of the Lepidoptera collected by Mr. H. H. Johnston during his recent expedition to Kilima-njaro. By F. D. GODMAN, F.R.S., &c.

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Mr. Johnston's collection of Lepidoptera contains 61 specimens, including examples of 27 species; of the latter there are 21 species of Rhopalocera and 6 of Heterocera. Of the Rhopalocera I have described three species as new, and a fourth, a *Chrysophanus*, of which only one specimen of a female is in the collection, remains unnamed, though it too is probably new. This small collection therefore contains nearly twenty per cent. of novelties, which must be considered a high proportion.

But so small is the series that I do not think any comparison of the Lepidopterous fauna of this region with that of the rest of Africa can be entered upon with advantage. Suffice it to say that by far the majority of the species are widely distributed African ones; that there is a northern element, as shown in *Colias edusa*, and perhaps the *Chrysophanus*; and that there is barely a trace of the Abyssinian fauna in the materials before me. But these suggestions may all be set aside whenever a really representative collection is made. Of the 27 species no less than 19 are represented by single specimens.

RHOPALOCERA.

1. DANAIIS DORIPPUS.

Euploea dorippus, Klug, Symb. Phys., Insecta, t. 48. f. 1-5.

Kilima-njaro, rocky, wooded, and cultivated country and grassy downs, at 4000-5000 feet, July.

Four examples (2 ♂, 2 ♀).

None of these specimens have any white on the secondaries, and agree best with fig. 5 of Klug's plate. *D. dorippus* is a common East-African species.

2. ACRÆA JOHNSTONI, sp. nov.

Alis anticis rufis, apicibus et marginibus externis (introrsum valde sinuatis) nigro-fuscis; posticis ad basin et marginibus externis late nigrescentibus, area discali albida venis fuscis divisa; subtus anticis fere omnino rufis ad marginem externum canescentibus, venis nigris et inter eas striolis fuscescentibus; posticis ut supra, limbo externo canescente, venis et striolis inter eas diviso; maculis quibusdam ad basin nigris; palpis, femoribus interne, abdomine infra, et maculis costalibus, rufis; capite et thorace maculis albis notatis.

Kilima-njaro, clearing in forest at 5500 feet, September.

A single male specimen of this apparently very distinct species.

3. *ACRÆA INSIGNIS*.

Acræa insignis, Distant, P. Z. S. 1880, p. 184, t. xix. f. 6.

Acræa buxtoni, Hew. Ent. Month. Mag. xiv. p. 154.

Kilima-njaro, wooded hills at 5000 feet, August.

This insect was first described by Hewitson from examples procured by Buxton in the neighbourhood of Zanzibar, and was named by him after its discoverer. Mr. Distant pointed out that the name *A. buxtoni* had been already applied to another species by Mr. Butler, and hence renamed it as above. Our collection contains a good series of this insect, chiefly taken by Mr. Last at Manboia in Eastern Central Africa. These exhibit considerable variation in the amount of black at the base of the secondaries, for while some specimens have only four or five isolated spots, others have a large confluent patch occupying the basal third of these wings, and between these two extremes we have every intermediate form, all captured in the same locality and at the same time.

Mr. Johnston procured but a single example, which has the confluent black patch and agrees in this respect with some of our own specimens from Manboia.

4. *ACRÆA BRÆSIA*, sp. nov.

Alis anticis semihyalinis ad basin rosaceo suffusis; macula in cellula, altera ad finem ejus, quinque in serie fere recta ultra eam, una inter ramos medianos, duabus inter ramum medianum primum et venam submedianam nigris, margine externo fusco-nigro maculis lunulatis submarginalibus rufis; posticis rosaceis ad basin obscurioribus, margine externo nigro, area discali plus minusve maculata; subtus anticis fere ut supra; posticis flavidis nigro distincte maculatis, ad basin et marginem internum rosaceo notatis; margine externo nigro lunulas septem flavidas includente; fronte, palpis et pedibus fulvis; abdomine subtus flavido, lateribus albo maculatis; capite, prothorace et thorace albido distincte maculatis.

Kilima-njaro, in wooded country at 5000 feet, August.

A single male specimen allied to *A. oncæa*, differing in its diaphanous primaries and its more rosy secondaries.

5. *ACRÆA NATALICA*.

Acræa natalica, Boisd. Voy. Deleg. ii. p. 590; Hopff. in Pet. Reise, Zool. v. p. 371, t. 23. f. 12, 13.

Kilima-njaro, grassy downs at 6000 feet, June.

One example (♀).

Agrees best with specimens of this species, but the disk of the secondaries is whiter and the spots in general are larger.

6. *PYRAMEIS CARDUI*.

Papilio cardui, Linn. Syst. Nat. i. p. 276.

Kilima-njaro, in thin forest country at 7000 feet, July.

One much worn male.

7. JUNONIA CLELIA.

Papilio clelia, Cram. Pap. Exot. t. 21. f. E, F.

Kilima-njaro, rocky country at 4000 and 5000 feet, wooded country and grassy downs at 5000 feet, June to July.

8. JUNONIA ÆNONE.

Papilio ænone, Linn. Mus. Ulr. pp. 274, 275.

Kilima-njaro, in rocky, grassy, and wooded country, at 5000 feet, wooded country at 6000 feet, June and July.

Six specimens, all males, of this widely ranging species.

9. PRECIS SESAMUS.

Precis sesamus, Trimen, Trans. Ent. Soc. 1883, p. 347.

Kilima-njaro, forest country at 7000 feet, July.

One example (♂).

10. LYCÆNA GAIKA.

Lycæna gaika, Trimen, Trans. Ent. Soc. 3rd ser. i. p. 403.

Kilima-njaro, grassy downs at 5000 feet, June.

One male.

The single specimen agrees with Trimen's description and with our series of this species. It appears to us to be distinct from *L. lysamon*, with which Mr. Trimen united his *L. gaika* in the 'Rhopalocera Africæ Australis.' Both species occur in South Africa; but *L. lysamon* may always be distinguished by the presence of a black spot within the cell of the primaries.

11. CHRYSOPHANUS, sp. ?

Kilima-njaro, grassy downs at 5000 feet, June.

A single female example of a true *Chrysophanus*, which we are unable to recognize and which we hesitate to describe without specimens of the other sex.

12. TERIAS RAHEL ?

Papilio rahel, Fabr. Ent. Syst. iii. p. 204 (apud Trimen).

Kilima-njaro, wooded country at 5000 feet, August.

A single female specimen, which we cannot undertake to determine with certainty without examples of the other sex. It may possibly be the female of *T. candace*, Feld., from Abyssinia.

13. PIERIS SEVERINA.

Papilio severina, Cram. Pap. Exot. t. 338. f. G, H.

Kilima-njaro, wooded country at 5000 to 6000 feet, July and August. Tavietta, dense forest at 2300 feet, September.

One male and three females.

14. PIERIS HELLICA.

Papilio hellica, Linn. Syst. Nat. i. p. 760.

Kilima-njaro, wooded, rocky, and cultivated ground, grassy downs, at 4000 to 5500 feet, July and August.

Thirteen males and one female.

All the specimens have the primaries rather more pointed, with a slightly blacker apex, and the colouring of the underside is brighter than in the examples in our own collection.

15. *ERONIA CLEODORA*.

Eronia cleodora, Hübn. Samml. exot. Schmett. ii. t. 130.

Tavieta, in dense forest at 2300 feet.

16. *CALLIDRYAS PYRENE*.

Colias pyrene, Swains. Zool. Ill. i. t. 51.

Kilima-njaro, in wooded country at 5000 feet.

Two females only.

17. *CALLIDRYAS FLORELLA*.

Papilio florella, Fabr. Syst. Ent. p. 479.

Kilima-njaro, in wooded country, at 6000 feet.

A single female specimen.

18. *COLIAS EDUSA*.

Papilio edusa, Fabr. Mant. Ins. ii. p. 23.

Kilima-njaro, wooded and grassy country at 4000 and 5000 feet, July.

Four males and one female.

19. *TERACOLUS AURIGINIUS*.

Teracolus auriginus, Butl. Ann. Mag. Nat. Hist. ser. 5, vol. xii. p. 103.

Kilima-njaro, in wooded and grassy country, 5000 and 6000 feet.

Two examples agreeing with specimens in the British Museum thus named by Mr. Butler.

20. *PAPILIO DEMOLEUS*.

Papilio demoleus, Linn. Syst. Nat. i. p. 753.

Kilima-njaro, in wooded country at 5000 feet, August.

A single specimen of this common African species.

21. *PAPILIO BRONTES*, sp. nov.

Alis nigris, fascia lata communi, ad costam anticarum disjuncta, metallico-cærulea, macula parva ad anticarum apicem et posticis seric submarginali ejusdem coloris; subtus fusco-nigris, anticis ad apicem et posticis omnino, brunnescentioribus, his venis et striis tribus in cellula longitudinalibus nigris, fascia communi submarginali a vena mediana anticarum ad angulum posticarum analem transeunte, venis nigris divisa, in anticis quoque inter venas bisecta lactescente-alba, margine posticarum interno maculis parvis duabus ejusdem coloris, posticis subcaudatis, vena mediana producta.

Kilima-njaro, in forest country at 5000 feet, August.

Allied to *Papilio bromius*, but the transverse band is of a deeper blue, both wings are less elongated, the secondaries are more acutely produced at the anal angle. Beneath, the light-coloured submarginal band is straighter on the secondaries and less broken up, moreover it is extended on the primaries as far as the median nervure beyond the cell; the apex of primaries and the secondaries are browner, and though the latter have three radiating streaks in the cell as in *P. bromius*, there are no intervenal streaks beyond it.

A single male specimen is the only one Mr. Johnston obtained.

HETEROCERA.

Mr. Johnston's collection contains six specimens of as many species of Heterocera, and for these Mr. Butler has kindly given us the following names.

22. *ACHERONTIA ATROPOS*.

Kilima-njaro, forest at 3000 feet, September.

23. *MECYNA POLYGONALIS*.

Kilima-njaro, wooded country at 5000 feet, August.

24. *HYPINA*, sp. ?

Kilima-njaro, wooded country at 5000 feet, July.

25. *STERRHA OACRARIA*.

Kilima-njaro, scrubby heath at 8000 feet, July.

26. *PRODENIA* ?

Kilima-njaro, wooded country at 5000 feet, September.

27. *AMYNA*, sp. ?

Kilima-njaro, wooded country at 5500 feet, August.

June 2, 1885.

Prof. W. H. Flower, LL.D., F.R.S., President, in the Chair.

Mr. F. E. Beddard read an account of the anatomy of the Soudaic Rhinoceros (*Rhinoceros sonduicus*), drawn up by Mr. F. Treves, F.R.C.S., F.Z.S., and himself from the specimen of that Rhinoceros lately living in the Society's Menagerie.

This paper will be published entire in the Society's 'Transactions.'

A communication was read from Dr. Julius von Haast, F.R.S., C.M.Z.S., containing an account of the remains of a gigantic extinct bird allied to *Apteryx* recently discovered in New Zealand, on which it was proposed to found a new genus and species, to be called *Megalapteryx hectori*.

This memoir will be printed entire in the Society's 'Transactions.'
